

REMARKS

This Amendment and Response to Office Action is in reply to the Office Action dated April 27, 2006. Claims 1 to 23 are currently pending in this Application. Applicants have amended Claims 1, 7, 8, and 19 for clarification purposes and not for any reasons related to patentability.

Applicants submit herewith a Supplemental Information Disclosure Statement.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102(b)

The Office Action rejected Claims 1 to 4, 6 to 8, and 13 to 21 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,556,932 to Coscia et al. ("Coscia"). Applicants respectfully disagree with and traverse this rejection.

Coscia discloses ionic water-soluble polyvinylamides having glyoxal content. (col. 1, lines 50 to 55 and col. 2, lines 50 to 53). The Coscia polymers are added to fibrous suspensions in papermaking systems from "as little as 0.2%" up to 2% of the dry weight of the fibers. (col. 7, lines 38 to 44). The Office Action states that 0.2% to 2% of the dry weight of the fibers is equivalent to 4 lb/ton to 40 lb/ton. (page 3).

Amended Claim 1 (and Claims 2 to 4, 6 to 8, and 13 to 21 which depend therefrom) relates to a method of enhancing the press section dewatering of a paper sheet on a paper machine. Among other elements, the method includes adding to the paper sheet about 0.05 lb/ton to about 3 lb/ton, based on dry fiber, of one or more aldehyde functionalized polymers.

Coscia does not expressly or inherently disclose adding to the paper sheet about 0.05 lb/ton to about 3 lb/ton, based on dry fiber, one or more aldehyde functionalized polymers. Instead, Coscia discloses adding 0.2% to 2% (i.e., 4 lb/ton to 40 lb/ton) polymer based on the dry weight of the fiber. Anticipation under § 102 is proper only when the reference discloses exactly what is claimed. Where the reference discloses a range that does *not* overlap or touch the claimed range, the reference does *not* anticipate the claimed range. (MPEP § 2131.03). Thus, Coscia does not expressly or inherently disclose the range of about 0.05 lb/ton to about 3 lb/ton, as in Amended Claim 1.

Furthermore, the Office Action states, “when the structure [or composition] recited in the reference is *substantially identical* to that of the claims, the claimed properties or functions are presumed to be inherent.” (page 3, emphasis added). The composition recited in Coscia is not substantially identical to that of Amended Claim 1 because 4 lb/ton to 40 lb/ton is not substantially identical to 0.05 lb/ton to 3 lb/ton. Such absence of substantial identity rebuts the above presumption.

Therefore, Applicants submit that Claims 1, 2 to 4, 6 to 8, and 13 to 21 are patentably distinct over Coscia and are in condition for allowance. Applicants respectfully request that this rejection be withdrawn.

The Office Action rejected Claims 1 to 4, 6 to 10, and 13 to 18 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,674,362 to Underwood et al. (“Underwood”). Applicants respectfully disagree with and traverse this rejection.

Underwood discloses a method for imparting strength to paper by adding a mixed resin solution during the papermaking process. (col. 2, lines 10 to 16). The mixed resin solution includes a glyoxylated acrylamide-diallyldimethyl ammonium chloride copolymer. (col. 3, lines 38 to 42). The copolymer has a molecular weight of about 500 g/mole to 100,000 g/mole. (col. 4, lines 1 to 5). Underwood discloses adding its copolymer to the papermaking process “before the slurry proceeds down the screen and is dried into a paper sheet.” (col. 4, lines 49 to 59).

Amended Claim 1 (and Claims 2 to 4, 6 to 10, and 13 to 18 which depend therefrom) relates to a method of enhancing the press section dewatering of a paper sheet on a paper machine. Among other elements, the method includes adding to the paper sheet one or more aldehyde functionalized polymers having a weight average molecular weight of greater than 100,000 g/mole.

Underwood does not expressly or inherently disclose adding to the paper sheet an aldehyde functionalized polymer having a weight average molecular weight of greater than 100,000 g/mole. Rather, Underwood discloses a copolymer having a molecular weight from about 500 g/mole to 100,000 g/mole. Underwood’s upper molecular weight limit is 100,000 g/mole, not *about* 100,000 g/mole.

In addition, Underwood does not disclose adding a polymer to the paper sheet. Instead, Underwood discloses adding its copolymer at a point in the papermaking process before the slurry is dried into a paper sheet.

As stated above, anticipation under § 102 is proper only when the reference discloses exactly what is claimed. Where the reference discloses a range that does not overlap or touch the claimed range, the reference does not anticipate the claimed range. (MPEP § 2131.03). Thus, Underwood does *not* expressly or inherently disclose adding to the paper sheet an aldehyde functionalized polymer having a weight average molecular weight of greater than 100,000 g/mole, as in Amended Claim 1.

Furthermore, the Office Action states, “when the structure [or composition] recited in the reference is *substantially identical* to that of the claims, the claimed properties or functions are presumed to be inherent.” (page 3, emphasis added). The copolymer recited in Underwood is not substantially identical to that of Amended Claim 1 because about 500 g/mole to 100,000 g/mole is not substantially identical to greater than 100,000 g/mole. Such absence of substantial identity rebuts the above presumption.

Therefore, Applicants submit that Claims 1, 2 to 4, 6 to 8, and 13 to 21 are patentably distinct over Underwood and are in condition for allowance. Applicants respectfully request that this rejection be withdrawn.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103(a)

The Office Action rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Coscia or Underwood in view of U.S. Patent No. 6,315,866 B1 to Sanchez. Applicants respectfully disagree with and traverse this rejection.

Claim 5 depends from allowable Amended Claim 1. Therefore, Applicants submit that Claim 5 is in condition for allowance and respectfully request that this rejection be withdrawn.

The Office Action rejected Claims 22 and 23 under 35 U.S.C. § 103(a) as being unpatentable over Coscia in view of Underwood. Applicants respectfully disagree with and traverse this rejection.

Claims 22 and 23 depend from allowable Amended Claim 1. Therefore, Applicants submit that Claims 22 and 23 are in condition for allowance and respectfully request that this rejection be withdrawn.

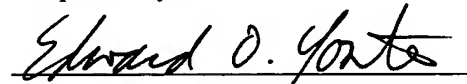
The Office Action rejected Claims 11 and 12 under 35 U.S.C. § 103(a) as being unpatentable over Coscia or Underwood in view of U.S. Patent No. 5,654,198 to Carrier et al. Applicants respectfully disagree with and traverse this rejection.

Claims 11 and 12 depend from allowable Amended Claim 1. Therefore, Applicants submit that Claims 11 and 12 are in condition for allowance and respectfully request that this rejection be withdrawn.

CONCLUSION

Applicants assert that the pending claims in this application are in condition for allowance and respectfully request that the Examiner send a timely Notice of Allowance. Early notice to this effect is earnestly solicited.

Respectfully Submitted,



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